ICEFIRE-T10A

10.4" Mobile Clinic Assistant

- 10.4" TFT XGA LCD
- Dual-mode input (digitizer + resistive touch)
- Dual hot swappable batteries
- Intel® Atom™ D525 dual core platform
- Powered by Windows® 7 Embedded
- 1D/2D barcode reader, RFID reader, smart card reader and fingerprint reader
- Bluetooth, Wi-Fi, 3.75G wireless

3.75G/ HSUPA | Bluetooth | Wi-Fi | Barcode Scanner | 2D Barcode Scanner

Digitizer Screen | Touch Screen | Camera | Finger Printer | SCR | RFID | Windows XP | Windows 7 | Intel Embedded Alliance | F3 One Key Recovery

Mobile Clinic Assistant Applications

Retrieve patient data at bedside for optimal point-of-care treatment.

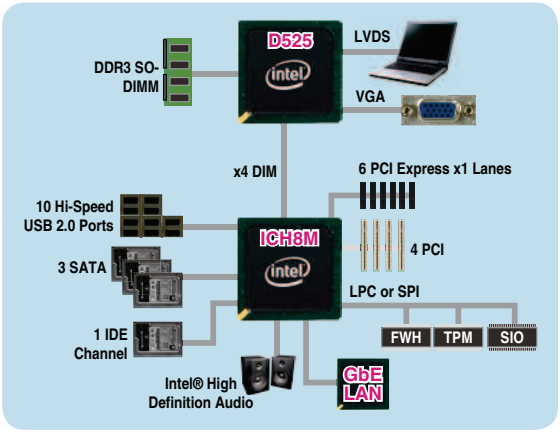
Instant access to patient medical history for real-time diagnosis.

Accurately capture and record patient symptoms during an emergency.

Increase productivity and decrease opportunity for errors through documentation directly at point-of-care.

High Performance and Low Power Consumption Mobile Platform

The ICEFIRE is powered by 1.80 GHz Intel® Atom™ D525 dual-core processor (1M cache). It is a compact and highly integrated application processor with excellent performance that enables low idle mode to improve power efficiency.

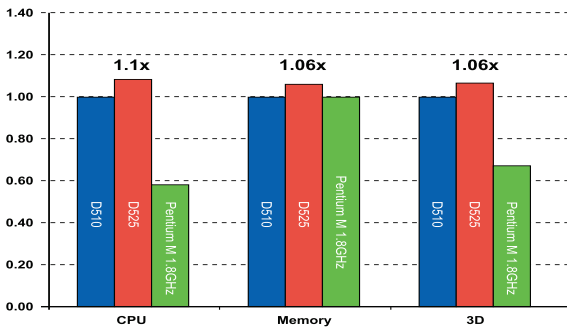


Features

- **DDR3 support up to 4GB by UEFI BIOS**
  - » Power saving more than 30% compared to DDR2
  - » Higher bandwidth performance, up to 2133 MT/s standardized
- **UEFI BIOS**
  - » Boot time under 10 seconds for fast boot
  - » Support HDD capacities more than 2.2 TB
  - » Support dual ranks x16 DDR3 memory up to 2 GB per DIMM, system up to 4 GB
- **New graphic performance**
  - » The GPU contains the 3rd generation graphics core GMA3150 support DX9*, MPEG2 hardware acceleration
  - » VGA resolution up to 2046x1536 MHz
  - » Single 18 bit LVDS resolution up to 1366x768 MHz

Pentium M replacement platform

D525: Intel® Dual Core™ Atom™ with DDR3 supported, performance 1.1x better than Intel® D510 (DDR2 Dual Core™ Atom™)



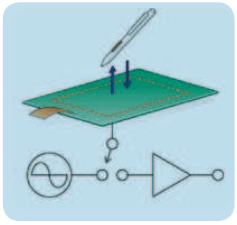
- Intel® Atom D510 1.66 GHz 1 MB/L2 Cache
- Intel® Atom D525 1.8 GHz 1 MB/L2 Cache
- Intel® 910GMLE Pentium® M 745 1.8 GHz/400 MHz 2 MB/L2 Cache

The ICEFIRE is preinstalled with Windows® 7 Professional for Embedded Systems. With Windows Touch, gestures, handwriting, voice recognition, and advanced 3D display control, user experiences are limited only by imagination.

The ICEFIRE is designed based on Windows and Intel® open architecture to extend mobility to point-of-care and healthcare software applications. This mobility allows many tasks to be performed on the run, minimizing time wasted between the nursing station and the patient's room. The ICEFIRE enables nurses to deliver higher quality patient care, while significantly improving productivity.

Dual-Mode Input

Along with Windows® 7 digitizer support and dual-mode input support, the ICEFIRE features both WACOM digitizer and traditional resistive touch input with auto-sensing and auto-switching. When a digitizer pen moves close to the screen of the ICEFIRE, the digitizer automatically takes effect and switches off resistive touch input mode.



Digitizer is a more accurate and sensitive input method that can detect stylus pressure, speed, and angle. This feature is suitable for a clinician to note patient's vital signs. Another key benefit of digitizer is to prevent mis-touch. A clinician can use the digitizer pen to write accurate prescriptions without the worry of error input due to mis-touch. The working principles of the EMR® digitizer are as follows:

- ■ The tablet surface incorporates a sensor board that detects the pen's movement.
- ■ Weak energy is induced in the pen's resonant circuit by a magnetic field generated by the sensor board surface.
- ■ The pen's resonant circuit then makes use of this energy to return a magnetic signal to the sensor board surface.

Enhanced On-screen keyboard

Hand-writing recognition

Dual input modes combined with acceleration keys make computing flexible and convenient for healthcare staff working in many different applications.

Digitizer Mode

Resistive Touch Mode

The ICEFIRE also provides Windows® 7 featured multi-touch, gesture, and hand-writing recognition

Multi-Touch Support

PC-Style Peripherals

10/100 Mbps Ethernet LAN

Whenever Ethernet LAN is available, the LAN port of the ICEFIRE provides another faster and more efficient networking option.

USB 2.0 Host

Supports connection to USB devices such as standard HIDs (Human Interface Device), keyboards, mouses, USB storage devices or USB card readers.

Bluetooth® v2.1 with EDR

Bluetooth provides a secure way to connect and exchange information with devices such as a mobile phone, handsfree headset, HID, printer, speaker, and Bluetooth medical devices.

Storage

Internal 1.8" SATA HDD for OS and user data/program installation.

Smaller and Lighter 1.8" SATA HDD

Audio

Built-in microphone and speaker

Microphone

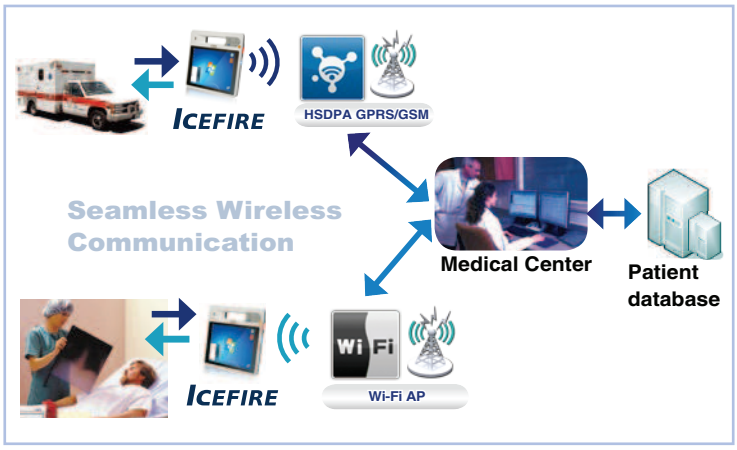
Speaker

Seamless Wireless Communication

In a local area where wireless LAN is available, the ICEFIRE connects to a wireless local area network (WLAN) via built-in 802.11 a/b/g/n wireless LAN communication module.

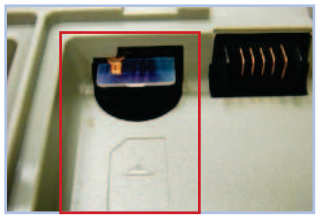
When wireless LAN is not available, the ICEFIRE connects to wide area network (WAN) via telecommunication and the built-in 3.75G modem.

With mobile communication technology, you can improve ongoing, critical dialogue between medical staffs. Records are accurate, research is readily available, and diagnosis and treatment are streamlined. By combining seamless wireless communication technology, voice over IP (VoIP), connectivity to central database, and web-enabled medical IT and application, the ICEFIRE helps caregivers get back to their top priority — spending time with their patients and providing point-of-care service.



3.75G/ HSUPA | Bluetooth | Wi-Fi

- Built-in Wi-Fi module with internal antenna
- Built-in Bluetooth module with internal antenna
- Built-in 3.75G modem with internal antenna



3.75G modem supported frequency list

Radio Mode	Band	UL freq (MHz)	DL freq (MHz)
WCDMA Release 99 HSDPA Release 5 HSDPA Release 6	1	1920-1980	2110-2170
	2	1850-1910	1930-1990
	5	824-849	869-894
	6	830-840	875-885
	8	880-915	925-960
GPRS EGPRS	850	824-849	869-894
	900	880-915	925-960
	1800	1710-1785	1805-1875
	1900	1850-1910	1930-1990

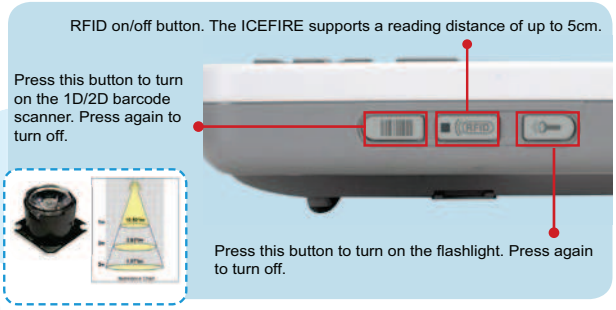
Advanced Data Acquisition Technology

1D/2D Barcode Scanner

	1D	2D
Speed	200 scans/s auto adaptive	60 images/s auto adaptive
Symbology	EAN/UPC, RSS, Code 39, Code 128, UCC/EAN 128, ISBN, ISBT, Interleaved, Matrix, Industrial and Standard 2 of 5, Codabar, Code 93/93i, Code 11, MSI, Plessey, Telepen, postal codes.	Data Matrix, PDF417, Micro PDF 417, Maxicode, QR, Aztec, EAN.UCC composite

LED Torch for Night Time Use

High performance LED flashlight
--- Never leaves you in the dark


RFID on/off button. The ICEFIRE supports a reading distance of up to 5cm.
Press this button to turn on the 1D/2D barcode scanner. Press again to turn off.
Press this button to turn on the flashlight. Press again to turn off.

13.56 MHz RFID Reader Supports ISO15693, ISO14443A and ISO14443B

The built-in RFID reader for data collection enables hospitals to automate data capture, improve data accuracy, increase productivity and streamline everyday processes in patient rooms, admittance, laboratories and the pharmacy.

3M-pixel Camera with LED Flash

- Integrate a 3M-pixel camera to capture image or data and immediately save it in the ICEFIRE or send back to the server via Wi-Fi or HSUPA.
- Press the camera hot key to start camera.
- Choose “Options” to preview and show the pictures.

Security and Access Control

Combined with Windows® 7 Embedded security management feature, the built-in fingerprint reader allows hospitals to control access priorities. The optional smart card reader that supports identity verification makes the ICEFIRE an ideal access control device for a transaction-based medical cloud-computing system.

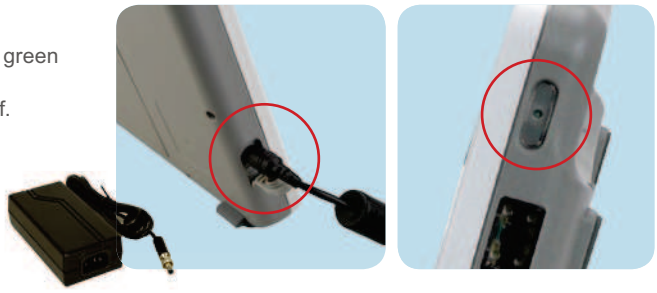
Optional Smart Card Reader (SCR)

Fingerprint Reader

Efficient Power Management

Illuminated Power Button Supports Laptop-style Power Management

- One click to boot up the system. The green LED turns on.
- One click to suspend the system or to resume from suspend mode. The green LED blinks when the system is in suspend mode.
- Push for four seconds to shut down the system. The green LED turns off.



DC Power Input

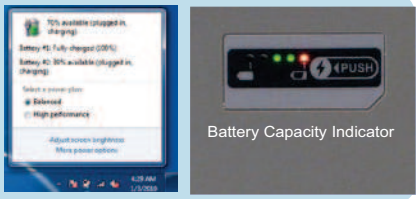
The bundled AC to DC power adapter provides 12 V electricity power to the ICEFIRE to run in full-speed and charge batteries simultaneously.

Dual Battery Pack

Each battery pack, with medical-grade certifications, provides 11.1 V 1880 mAh capacity, and supports a hot swappable function. When one battery is removed, the system automatically switches power consumption to the other battery. With an additional battery pack and the hot swappable feature, the ICEFIRE ensures non-stop point-of-care, 24 hours a day, every day.

Each battery pack has capacity indicators. Besides these visual indicators, operating system like Windows® 7 also shows available batteries and capacities in desktop.

The ICEFIRE first consumes the battery with lower power capacity then the other. While charging batteries, the ICEFIRE charges the battery with higher power capacity first then the other.



With two hot swappable batteries, medical staff can easily replace the existing battery with a fully charged battery without turning off the system, disconnecting from wireless, or closing/interrupting software applications. This feature enables continuous and uninterrupted point-of-care services.

Indicators and Hot Keys

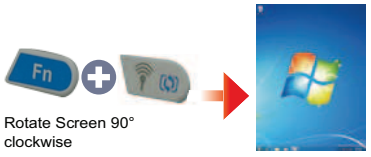
Indicators

- Green light shows Wi-Fi® is enabled
- Blue light shows Bluetooth® is enabled
- Orange light shows that Battery-1 is being charged
- Orange light shows that Battery-2 is being charged

Hot Keys

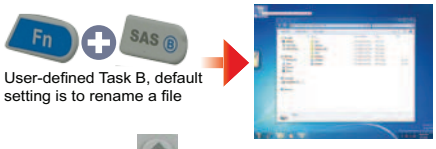
- 4-direction keys (UP, DOWN, LEFT, and RIGHT), and ENTER key
- Wi-Fi on/off button
- Bluetooth on/off button
- Secure Attention Sequence (SAS): identical to “CTRL-ALT-DEL” keystroke combination.

Function Key Combinations



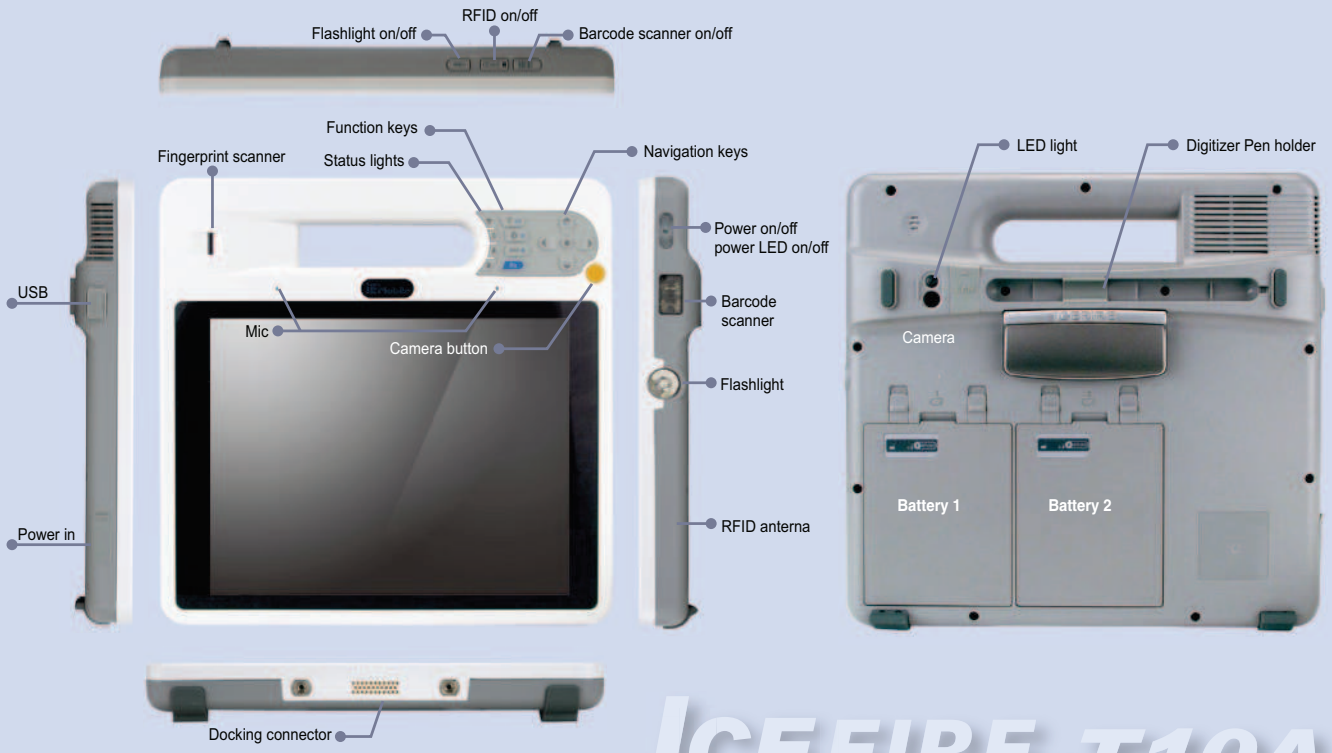
Rotate Screen 90° clockwise

User-defined Task A, default setting is to launch Windows File Manager



User-defined Task B, default setting is to rename a file

Function Key + Up/Down Key LCD Brightness Control



Compact, Slim, and Ergonomic Design

IP64 Compliant and Easy-to-Clean Plastic Housing

Ergonomic Handlebar and Hinge Stand

Handle design for easy carry

Ergonomic Grip Handle

Desk-mount stand for ease of use

Medical-grade Certification Approved

Slim and Lightweight Design

1.8 kg with Battery

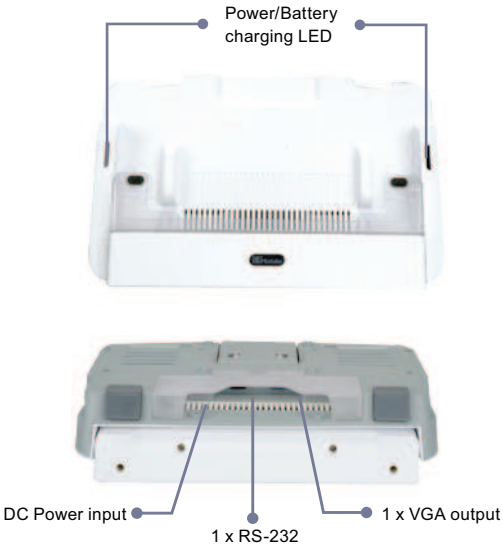
Germproof Housing

One Key Recovery

IEI One Key Recovery uses exclusive technology to recover and backup your system by just one click without any complicated settings.

Recover the system from
- Severe virus attack
- Operating system crash
- Man-made disasters

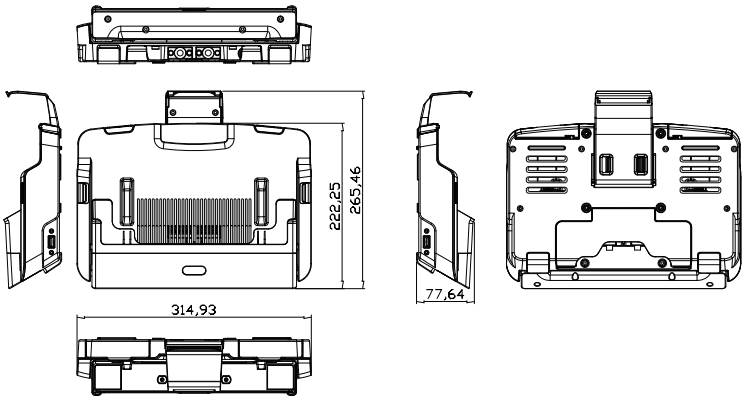
Multi-functional Docking Station



Battery Charging Packs

The ICEFIRE Docking Station (ICEFIRE-DS) provides electricity power to one docked ICEFIRE and two plug-in battery packs simultaneously.

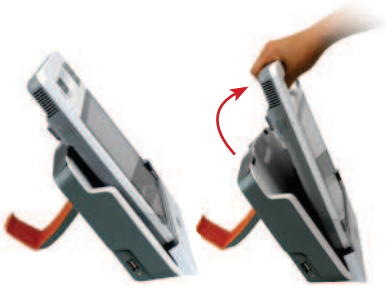
Docking Dimensions (Unit: mm)



Easy and Flexible Installation

Desktop Installation

Wall-mount Installation



Ergonomic Sliding and Hooking Design

WOW (Workstation on Wheels) Installation

The combination of ICEFIRE and ICEFIRE Docking Station is an ideal solution for a healthcare carts:

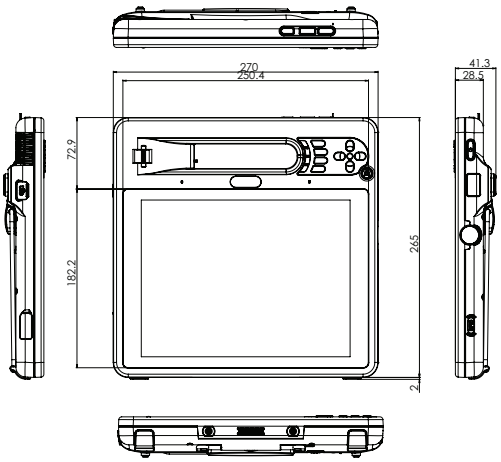
- Desktop, swing arm, or VESA mounting options
- Expanded I/O to integrate with existing keyboard/mouse, printer, barcode scanner, or medical equipments
- Easy to draw out and draw back
- Convenient bedside healthcare
- Power and battery options support uninterrupted point-of-care

Specifications

Model		ICEFIRE
Display	LCD Size	10.4" TFT LCD
	Brightness (cd/m²)	350 cd/m²
	Max Resolution	1024 x 768 pixels XGA
	Viewing Angle	88/88/88/88 Deg.
	Touch Screen	Resistive Support Multi-touch and Gesture
	Digitizer	256 levels @ full scale Pressure Resolution
System	CPU	Intel® Atom™ D525 1.8GHz
	Chipset	Intel® ICH8M
	Operating System	Microsoft® Windows® 7 Embedded
	Memory	2GB DDR3 SDRAM 1333MHz
	Storage	1.8" 120G HDD, SATA
Communication	Wireless LAN	Wi-Fi® 802.11a/b/g/n
	Bluetooth	Bluetooth® V2.1+ EDR (Class II)
	DataRate	WCDMA/HSUPA
Data Collection	Camera	3M pixel and LED Light
	Barcode	1D/2D Imager Scan Engine
	RFID	13.56 MHz RFID support ISO15693 and 14443A/B compliant
Indicator & Buttons	LED Indicator	Power/ Wi-Fi/Bluetooth/ RFID/ Battery Status LED
	Keys	5-way Navigation key Barcode Scanner/ RFID / LED Torch/ Camera Wi-Fi/Bluetooth/SAS/Function Key
I/O Interface	USB	1 x USB 2.0
	LAN	1 x 10/100M LAN
	Audio	1 x 2W Speaker
		1 x Mic in
	LED Torch	1 x LED Torch
Power	Power Adapter	12V@5A@60W
	Docking Power Adapter	19V@4.74A@90W
	Battery	Dual 11.1V 1880mAh Li-ion Battery

Environment	Operating Temperature	0ºC to +40ºC
	Storage Temperature	-10ºC to +60ºC
	Humidity	5%~95% non-condensing
	Drop Survival	1.0 M
	Environmental Protection	Front Panel IP64 compliant
	Certification	CE/FCC, Medical-grade Class B
Physical Characteristics	Dimensions (LxWxH) (mm)	270 x 265 x 29
	Weight	1788 g

ICEFIRE-T10A Dimensions (Unit: mm)



Ordering Information

Part No.	Describtion
ICEFIRE-T10A-HU/2G-R10	10.4" TFT-LCD 350 cd/m² XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ D525 1.8GHz CPUIntegrate Multi-Touch and Digitizer Dual Mode 2GB DDR3 RAM, Gobi2000 HSUPA, 802.11 a/b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3M-Pixel Camera, LED Torch , RoHs
ICEFIRE-T10A-TR/2G-R10	10.4" TFT-LCD 350 cd/m² XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ D525 1.8GHz CPU Integrate Resistive Touch, 2GB DDR3 RAM, 802.11 a/b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3M-Pixel Camera, LED Torch, RoHs

Support Function

Part Number	Digitizer	Touch	Wireless	Bluetooth	3.75G	Barcode	RFID
ICEFIRE-T10A-HU/2G-R10	Digitizer	Resisitve Multi-Touch	802.11 a/b/g/n	Ver. 2.1+EDR, Class 2	Gobi 2000	1D/2D Barcode Scanner	RFID
ICEFIRE-T10A-TR/2G-R10	N/A	Resisitve Multi-Touch	802.12 a/b/g/n	Ver. 2.1+EDR, Class 2	N/A	1D/2D Barcode Scanner	RFID

Packing List

Item	Part No.	Q'ty	Description
Digitizer Pen	7Z000-UP7110E63C1-RS	1	Digitizer Sensor Pen Exclusive for ICEFIRE-T10A-HU/2G-R10
Battery Pack	31603-000016-RS	2	11.1V 1880 mAh Battery
Medical-grade Power Adapter (12 V, 5 A, 60 W)	63040-010060-020-RS	1	12V 5A 60W Medical Power Adapter
User's Manual CD ROM	7B000-000552-RS	1	

Carrying Case

Docking Station

Smart Card Reader

Battery Pack

12V Power Adapter

19V Power Adapter

Digitizer Pen

Optional Accessory List

Item	Part No.	Description
Docking Station	ICEFIRE-T10A-DS01-R10	ICEFIRE-T10A Docking Station
		Medical Docking Power Adapter 19 V, 4.74 A, 90 W 63040-010090-000-RS
Smart Card Reader	ICEFIRE-T10A-SCR01-R10	USB 2.0 Compliant interface Smart Card Reader Comply with ISO7816-1,2,3 for ICEFIRE-T10A
Battery Pack	31603-000016-RS	11.1V 1880 mAh Battery
Digitizer Pen	7Z000-UP7110E63C1-RS	Digitizer Sensor Pen
Carrying Case	ICEFIRE-CB01-R10	Black, leathre protective bag with shoulder strap